

## TOWN OF UNDERHILL, VERMONT

Article V, Section 5.3 – Site Plan Review Standards  
Findings ChecklistDocket #: DRB-17-16 Property ID: PR025 Hearing Date: 12/04/2017Applicant/Consultant: Peter K Duval

Check the zoning district(s) in which the proposed use will occur:

<input type="checkbox"/> Underhill Flats Village Center	<input type="checkbox"/> Rural Residential	<input checked="" type="checkbox"/> Water Conservation
<input type="checkbox"/> Scenic Preservation	<input type="checkbox"/> Soil & Water Conservation	

*The following standards are excerpted from Article V, Section 5.3 of the Unified Land Use and Development Regulations. For full standards, refer to the complete regulations document.*

*Applicant(s) shall submit proposed findings of fact for each of the relevant standards below as part of the application for site plan review. Proposed findings shall address how the proposed development relates to each portion of the standard.*

RequiredSubmittedSection 5.3 (B) Standards(1) Existing Site Features.

Demonstrate how the proposed site layout and design avoids undue adverse impacts to significant natural, historic, and scenic resources. Refer to Section 5.3 (B)(1)(a) for specific areas of concern.

Using an existing building and driveway footprint, the project minimizes impermeable surface, and limits site disturbance. The building site is at the crest of a sandy deposit with a level access from the road, minimizing runoff. The site is distant from surface water. It is a very dry location. Nonetheless, best practices to prevent soil erosion will be used during any excavation.

The site retains a large, old white pine tree and tall red pine trees that are characteristic of the surrounding pine plantation. New tree species will be planted.

a.

i.

The site's cresting topography and sandy soil allow precipitation to infiltrate quickly.

ii.

The site's elevation is approximately 850'.

iii.

Some cutting and filling may occur to integrate the project into the natural topography.

iv.

All soil disturbance will be at least 50' from Crane Brook's north top of slope. The proposed barn and residence are more than 200' from the top of slope.

v.

The building site is more than 200' from surface water and flood zones. Wastewater disposal will be at least 50' from the top of slope.

vi.

The site is within the Jericho Underhill Water District (system VT0005096) recharge area. There

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### Section 5.3 (B) Standards Continued



#### (2) Site Layout & Design.

Explain how the proposed location and orientation of structures, and supporting infrastructure on the site, are compatible with their proposed setting and context as determined from the Underhill Town Plan, zoning district objectives, existing site conditions and features, adjoining or facing structures in the vicinity, and other applicable provisions of the Unified Land Use and Development Regulations. Refer to Section 5.3(B)(2) for details.

The project site is near the center of Underhill Center, its proximity likely generating walking trips within the village. Enhanced by the proposed trail from Pine Ridge Road to Browns River, walking trips would be time competitive with driving a car, which must be done via a less direct route. The proposed trail could connect with a riverside path contemplated by the Town Plan.

A literal reading of the town's 2015 Road, Driveway and Trail Ordinance would set the driveway width at 20', which is about 1/4 of the total length. This is unreasonable for four reasons: it would have the appearance of a parking lot, the ordinance contemplates that such a driveway would normally serve detached houses on separate parcels. In the case of this project, the driveway serves just one residential building. Further, the drive is quite short, and it is unnecessary for more than 1 vehicle to use it at a time. A generous turnaround, well in excess of the Underhill Jericho Fire Department 15'x37.5' minimum, is provide. Finally, the project anticipates a decline in the use of private automobiles; the compact courtyard and driveway calm traffic and favor pedestrians and adaptive reuse of parking space. A 12' wide driveway is proposed.

In the reference design, the wooded front yard and low knoll with stone wall to the north finishes a four-sided courtyard which shields parked vehicles from the surrounding area. Buildings are recessed into the natural landscape and oriented for rooftop photovoltaic arrays and efficient passive solar heating and cooling.

The compact site layout minimizes impervious surface area, supporting the sole purpose of the Water Conservation District to "protect the important gravel aquifer recharge area in Underhill Center." (ULUDR, p.15)

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### Section 5.3 (B) Standards Continued

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#### **(3) Vehicle Access.**

Explain how the proposed use meets all town and state access management and design standards. Include an explanation of how the curb cut(s) and road intersection(s) do not create hazards to vehicles, pedestrians or bicyclists onsite or on adjoining roads, sidewalks, and pathways.

The existing curb cut, at a slight crest on a low volume residential road, provides long sight distances, which could be increased with a small amount of vegetation trimming and earth work. The already mixed environment of pedestrians, cyclists, pets and cars is enhanced by the proposed trail and increased pedestrian activity to be generated by the project.

Required

Submitted

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#### **(4) Parking, Loading & Service Areas.**

Indicate how the proposed use conforms to the requirements of this section.

In the reference design, covered parking will be incorporated into the structures surrounding the courtyard. The courtyard provides direct access to the buildings, while screening parking and activity from view.

Solid waste collection areas for compost, recycling and trash, will be under shelter, secure from animals.



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### Section 5.3(B) Standards Continued

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#### **(5) Site Circulation.**

Explain how the proposed use has provided for adequate and safe onsite vehicular and pedestrian circulation. Site plans shall include the requirements of Section 5.3(B)(5)(a), (b) where applicable.

This project uses an existing curb cut. Monderman design principles will be used in the update of the driveway and parking courtyard, which is shielded from the road by a tree-covered knoll. The driveway meets the minimum curve radius of 35'. The courtyard provides a generous turnaround for emergency vehicles.

A trail is proposed to connect Pine Ridge Road with Browns River.

Required

Submitted

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#### **(6) Landscaping and Screening.**

Explain how the proposed plan incorporates the landscaping and screening requirements of Section 5.3(B)(6).

Existing vegetation will be left in place and additional species, such as balsam and spruce, will be planted. The front yard will remain wooded. Existing tall trees will be preserved to the greatest extent possible.

Permaculture techniques, such as swales, berms and hugelkultur will be used where appropriate to enhance productivity and aid water collection and infiltration.

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### Section 5.3(B) Standards Continued

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#### **(7) Outdoor Lighting.**

Does the proposed use require outdoor lighting?

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Yes

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No (*If no, skip to #8*).

Explain how the proposed outdoor lighting conforms to the requirements of Section 3.11.

In the interest of designing accessible buildings, low, downward casting lights near doors, stairs and walkways are the only permanent outdoor lighting anticipated. All lighting will exceed the requirements of Section 3.11 of the ULUDR. Existing lights will be replaced with fixtures that meet or exceed the section 3.11 requirements. Interior lighting will be evaluated for its effect outside of the buildings.

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### Section 5.3(B) Standards Continued

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#### **(8) Stormwater Management and Erosion Control.**

Indicate how the proposed use incorporates the requirements of Section 5.3(B)(8) including temporary and permanent stormwater management and erosion control measures.

Because of deep sandy soil on the site, water infiltrates almost immediately. Permaculture cross-slope swale and hugelkultur will aid in the retention and infiltration of ground water.

There will be little increase in the already small area of impermeable surface. Techniques for increasing permeability of the driveway and parking surfaces will be considered.